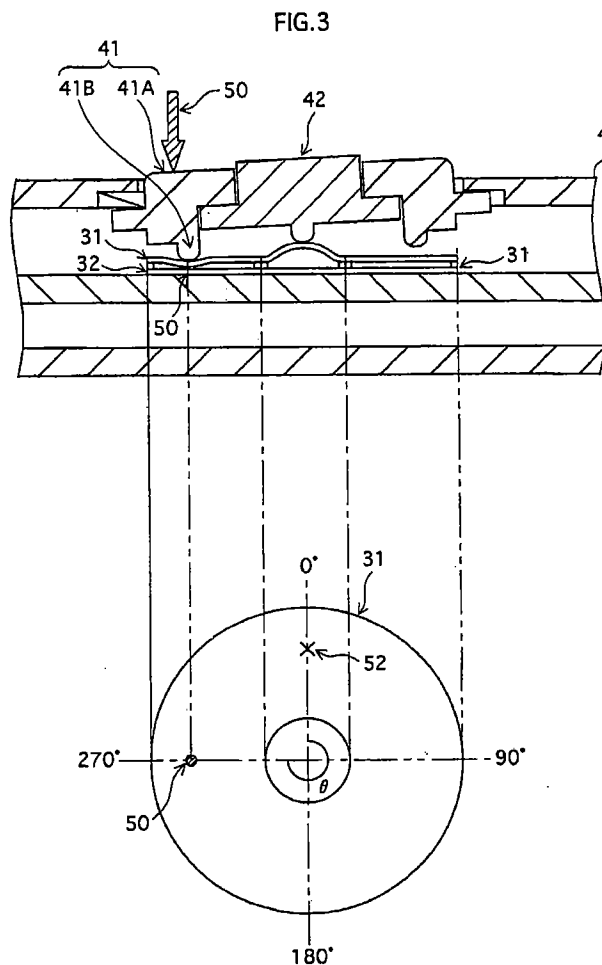# REMARKS

Our present invention can be implemented with a controller shown, for example in Figure
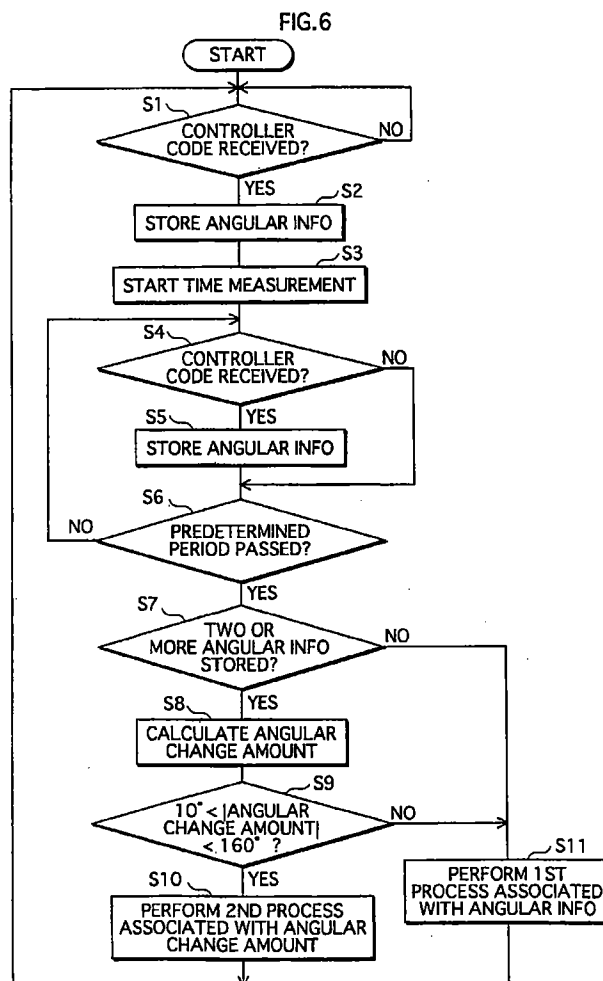
3 hereafter.

FIG.3

As can be determined from Figure 3 above, a user can activate a particular point, such as

50, where an entry controller code is generated that responds to angular information to identify

the location of a contact point.

As can be seen in Figure 6, certain decisional boxes related with calculating a

predetermined time period such as 400 ms, see Paragraph 0149, and also calculating the amount

of change between the angles indicated by respective first and last stored pieces of angular information is generated, whereby an absolute value of the amount of angular change must satisfy an algorithm where the minimal deviation, e.g. ± 10° can eliminate any potential shaking of a user's hands.

Thus, as seen in the flow chart of Figure 6, a predetermined time period is judged in Step 6 while compliance with an algorithm of angular change amount is determined in Step 9. As a result, a first process associated with angular information can be implemented in Step 11 or a second process associated with the angular change amount can be implemented in Step 10.

FIG.6

START

S1 — CONTROLLER CODE RECEIVED? NO

YES S2

STORE ANGULAR INFO

S3

START TIME MEASUREMENT

S4 — CONTROLLER CODE RECEIVED? NO

S5 — YES

STORE ANGULAR INFO

S6 — PREDETERMINED PERIOD PASSED? NO

YES

S7 — TWO OR MORE ANGULAR INFO STORED? NO

S8 — YES

CALCULATE ANGULAR CHANGE AMOUNT

S9 — 10° < |ANGULAR CHANGE AMOUNT| < 160° ? NO

S10 — YES

PERFORM 2ND PROCESS ASSOCIATED WITH ANGULAR CHANGE AMOUNT

S11

PERFORM 1ST PROCESS ASSOCIATED WITH ANGULAR INFO

[0138] The step 4 is repeated until a predetermined time period has passed from the start of time measurement (step S6: NO). Upon expiration the predetermined time period (step S6: YES), the processing moves onto a step S7.

[0139] In the step S7, if the RAM 17 stores two or more pieces of angular information indicating mutually different directions (step S7: YES), the STB 1 calculates the amount of change between the angles indicated by the first and last stored pieces of angular information (step S8).

[0140] Next, the STB 1 judges whether the absolute value of the amount of angular change satisfies the condition $10° < |\text{Amount of Angular Change}| < 160°$ (step S9). If the condition is satisfied (step S9: YES), the STB 1 performs a second process associated with the amount of angular change (step S10), and goes back to the step S1.

The Office Action contended Claims 1-2, 5-7 and 18-19 were completely anticipated by *Hagiwara et al.* (U.S. Patent Publication 2001/0048422).

For the *Hagiwara et al.* reference to be an anticipatory reference, it must show all of the claim elements of each of our independent Claims 1, 18 and 19 along with the cited dependent claims. *Hagiwara et al.* sought to address problems associated with having a significant amount of space dedicated to an input of a character, for example by a keyboard apparatus, while limiting the amount of key operations that would be required, along with removing the necessity of a time period required to move a cursor to identify a displayed input character or number on a display screen. See Paragraph 0009.

To accomplish this structure, *Hagiwara et al.* taught a disc-like operational body 3a that could be operated by hand and supported by a vertical shaft or support member 12. X, Y variable resistors can be positioned on outside surfaces of a frame. A rotational and inclination movement in a direction of characters arranged equally around the surface of the shaft 12 can indicate a character position as a first detection unit.

Additionally, downward movements in the Z direction can activate a micro switch, as a second detection unit, for actually selecting a specific character, as can be schematically shown in Figures 4a and 4b:

FIG. 4A

FIG. 4B
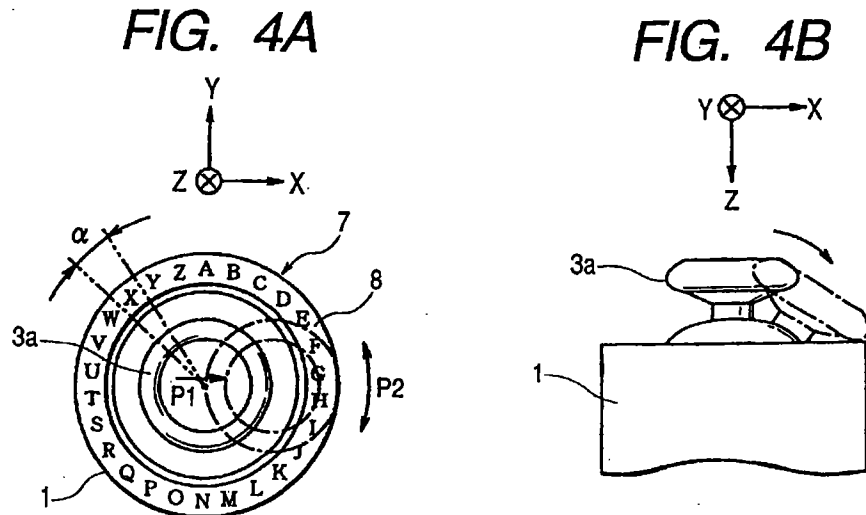
This operation is described in the following Paragraphs 0040 and 0043:

[0040] In detail, when the operation body 3a is inclined, the inclination direction data that represents the inclination direction of the operation body 3a is generated based on the resistance value generated from the variable resistor 13X and/or the variable resistor 13Y of the first detection unit 13 in the control unit 15. The position of the alphabet region that is selected from among 26 characters is discriminated, and the code data specific to the character data is generated. The data generation unit 17 generates the display (font) data comprising a character corresponding to the code data, and one alphabet out of alphabets 8 corresponding to the display data is displayed on the display unit 11. The memory 16 stores the display data corresponding to the code data. The memory 16 may be used partially as a storage region for storing the input character data.

[0043] In detail, when the operation body 3a is pushed down, the projection 12e is lowered slightly correspondingly to the pushing down operation, and the projection 12e pushes down the small projection 14a against the urgent pushing-up force. Thereby, the switch output is turned on, and the pushing operation of the operation body 3a is detected. When the pushing-down force exerted on the operation body 3a is released, the small projection 14a and projection 12e is returned to the original position by the urgent pushing-up force, and the switch

output is turned off. When the operation body 3a is to be pushed down, it is recommended that the <u>operation body 3a is pushed down after the operation body 3a is returned to the original position</u>. (underline added)

Thus, the *Hagiwara et al.* reference would teach to a person of ordinary skill in this field that each of 26 characters of the alphabet can be allocated as an angular region of (26/360), which is a value obtained by equally dividing 360 degrees by 26. A desired alphabetical character is then selected with the use of a mechanical controller having an operation body that can be inclined in any one of three or more directions. More specifically, the operation body of the controller is inclined toward a direction that falls within the angular region allocated to the desired alphabetical character. In view of the fact that the operation body may not be inclined in a direction directly toward a desired angular region, the operation body is rotatable while being inclined, so as to be moved into the desired angular region. An alphabetical character to be displayed is selected according to the angular region in which the operation body of the controller is ultimately positioned.

According to *Hagiwara et al.*, however, the selection of an alphabetical character to be displayed is selected based exclusively on the angular region coinciding with the ultimate position of the operation body of the controller. In other words, the selection is not made based on the amount of angular change between the first and second directions but on rotational inclination and a centering of the shaft followed by a depression to activate a micro switch.

According to *Hagiwara et al.*, the process to be executed is always associated with an ultimate position of the operation body of the controller. *Hagiwara et al.* discloses nothing about judging whether to perform the process in association with an amount of change.

In contrast, Claim 1 of the present application defines a directional input unit that receives an input specifying a first direction followed within a predetermined time period by an

input specifying a second direction, a calculating unit calculates the amount of change from a first direction to a second direction. A judging unit judges whether the calculated amount of change falls within a predetermined range. The processing unit then performs a first process associated with each of the first and second directions (hereinafter, referred to as the "process associated with the directions") when the judging unit judges negatively, and performs a second process associated with the amount of change (hereinafter, referred to as the "process associated with the amount of change") when the judging unit judges affirmatively.

Unlike *Hagiwara et al.* that only uses the ultimate angular region, which is an absolute measure, Claim 1 of the present application uses both the amount of angular change (a relative measure) and a direction (an absolute measure). By virtue of using the relative measure as well as the absolute measure, Claim 1 of the present application calculates the amount of angular change and makes a judgment based on the calculated amount of angular change, and performs either the process associated with the directions or the process associated with the amount of change, depending on the judgment result.

Hagiwara et al. only uses an ultimate angular region, which is an absolute measure and does not use the amount of angular change, which is a relative measure. In view of this, it is not possible to construe that *Hagiwara et al.* discloses the elements of our Claim 1, namely the "calculating unit", the "judging unit", and the "processing. unit" each. of which relates to the amount of angular change, which is a relative measure.

With the above claim elements that use the directions per se as well as the amount of angular change between the directions, a user interface recited in Claim 1 of the present application achieves an effect of increasing the number of processes executable in response to a user operation by manipulating a directional input device.

As clarified above, Claim 1 of the present application has the elements not disclosed by *Hagiwara et al.*, and achieves the significant effect described above. In light of this, it is respectfully submitted that Claim 1 should not be rejected under 35 USC §102(b) as being anticipated by *Hagiwara et al.* and thus in condition for allowance.

Referring to Claim 1, we define a specific calculating unit that calculates an amount of change from a first direction to a second direction within a predetermined time period. We also define a judging unit that determines when the amount of change falls within the predetermined range, and a processing unit that can perform one of a first process associated with each of the first and second directions when the judging unit determines that the amount of change does not fall within the predetermined range, and performs a second process wh4en the amount of change is judged to be within the predetermined range.

These features are also repeated in independent Claims 18 and 19, and are not taught nor suggested in the *Hagiwara et al.* reference. It is respectfully submitted that the *Hagiwara et al.* reference does not qualify as an anticipatory reference under 35 U.S.C. §102.

> "An anticipating reference must describe the patented subject matter with sufficient clarity and detail to establish that the subject matter existed in the prior art and that such existence would be recognized by persons of ordinary skill in the field of the invention." *See In re Spada*, 911 F.2d 705, 708, 15 USPQ2d 1655, 1657 (Fed. Cir. 1990); *Diversitech Corp. v. Century Steps, Inc.*, 850 F.2d 675, 678, 7 USPQ2d 1315, 1317 (Fed. Cir. 1988).

Claims 3 and 4 are rejected over *Hagiwara et al.* when taken in view of *Trent, Jr. et al.* (U.S. Patent No. 7,466,307). More specifically, the *Trent et al.* reference was relied upon to teach a reference direction from which angles were measured. Needless to say, *Trent, Jr. et al.* does not teach specific features of the present invention as set forth in our claims and as supported by our flow chart in Figure 6, disclosed above.

Since the *Trent, Jr. et al.* reference does not rectify the deficiencies of the *Hagiwara et al.* reference, it is not an appropriate 35 U.S.C. §103 rejection.

> It is the Examiner's burden to establish *prima facie* obviousness. *See In re Rijckaert*, 9 F.3d 1531, 1532 (Fed. Cir. 1993) Obviousness requires a suggestion of all the elements in a claim *(CFMT, Inc. v. Yieldup Int'l Corp.*, 349 F.3d 1333, 1342 (Fed. Cir. 2003)) and "a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does." *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007). Here, we find that the Examiner has not identified all the elements of claim 1, nor provided a reason that would have prompted the skilled worker to have arranged them in the manner necessary to reach the claimed invention.

> *Ex parte* Karoleen B. Alexander, No. 2007-2698, slip op. at 6 (B.P.A.I. Nov. 30, 2007)

Claim 8 was rejected over a combination of *Hagiwara et al.* in view of *Inoue et al.* (U.S. Patent Publication 2003/0085793).

While *Inoue et al.* is of interest in disclosing the physical configuration of an input device, it does not teach the operational features as our defined in our flow chart Figure 6, and accordingly, cannot rectify the deficiencies of the *Hagiwara et al.* disclosure.

Claims 9 and 11 were further rejected over *Hagiwara et al.* in view of *Nguyen* (U.S. Patent No. 7,036,091).

The *Nguyen* reference basically was cited for disclosing a display that could provide a menu for a user. It does not, however, address the deficiencies of the *Hagiwara et al.* reference and accordingly, cannot render our present claims obvious.

Claim 10 was rejected over *Hagiwara et al.* in view of *Duarte* (U.S. Patent Publication 2003/0043206).

Duarte, as with the *Trent, Jr. et al.*, *Nguyen* and *Inoue et al.* references were simply cited to teach a display unit capable of showing a plurality of files and folders in an annular array. It does not have subject matter that would rectify the deficiencies in *Hagiwara et al.*

Claims 12 and 13 were also rejected as being obvious over the *Hagiwara et al.* reference in view of *Robbin et al.* (U.S. Patent Publication 2003/0095096).

Robbin et al. was cited for teaching a playback unit that could play back content with an audio adjustment of the volume output of the audio. Again, such a disclosure does not address the deficiencies of the *Hagiwara et al.* teachings.

Claims 14 and 15 are rejected over a combination of *Hagiwara et al.* in view of *Yamaguchi et al.* (U.S. Patent No. 6,710,771).

Yamaguchi et al. was only cited to disclose, again, a display with a chart setting option as shown in Figure 27, and a second table scaling factors disclosed in window 90. A map and cursor are as disclosed in Figure 28, with a storage unit capable of storing a pair of tables. Again, these features do not address the deficiencies of the *Hagiwara et al.* disclosure.

Claim 16 was rejected over *Hagiwara et al.* in view of *SanGiovanni* (U.S. Patent Publication 2002/0101441).

SanGiovanni was simply cited for teaching a managing unit that can rank and manage a plurality of options disclosed in Paragraph 0070. One of the options is the displaying of a spiral array in Figure 5. Again, the claim elements are neither taught nor suggested by this combination of references.

Finally, Claim 17 was rejected over *Hagiwara et al.* in view of *Goldenburg et al.* (U.S. Patent No. 6,636,197).

Goldenburg et al. was cited for teaching a display unit with an image of a vinyl recording while an output unit could provide audio output for adjusting the volume.
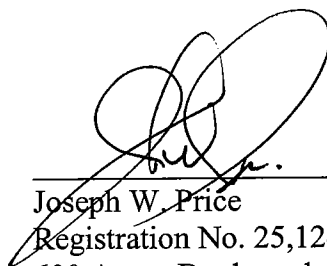
It is appreciated that these secondary references were cited for teaching specific features and not for the purpose of replacing some of the presumed teachings in the *Hagiwara et al.* reference.

It is respectfully submitted, however, that our present claims are allowable over any combination of the cited reference, and accordingly believe that the case is in condition for allowance and request an early notification of the same.

If the Examiner believes a telephone interview will assist in the prosecution of this case, the undersigned attorney can be contacted at the listed telephone number.

Very truly yours,

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